

# KIIT POLYTECHNIC, BHUBANESWAR

## LESSON PLAN

<b>Discipline :</b> CIVIL/MECH/METT	<b>Semester:</b> 1 <sup>st</sup>	<b>Name of the Teaching Faculty:</b> Abhaya Kumar Behera/Sunil Kumar Bhatta
<b>Subject: Basic Electrical Engineering</b>	No. Of Days/Week <b>4</b> Class Allotted <b>30</b>	Semester From Date: <b>9/11/20</b> To Date: <b>6/3/21</b> No. Of Weeks : <b>15</b>
<b>Week</b>	<b>Class Day</b>	<b>Theory/Practical Topics</b>
1st	1st	Concept of current flow, Concept of source and load, State Ohm's law and concept of resistance.
	2nd	Relation of V, I & R in series circuit
2nd	1st	Relation of V, I & R in parallel circuit
	2nd	Division of current in parallel circuit
3rd	1st	Effect of power in series & parallel circuit.
	2nd	Kirchhoff's Law, problems on Kirchhoff's law
4 <sup>th</sup>	1st	Generation of alternating emf, Difference between D.C. & A.C
	2nd	Define Amplitude, instantaneous value, cycle, Time period, frequency, phase angle, phase difference
5 <sup>th</sup>	1st	State & Explain RMS value.
	2nd	State & Explain Average value, Amplitude factor & Form factor with Simple problems.
6 <sup>th</sup>	1st	Represent AC values in phasor diagrams, AC through pure resistance, AC through pure inductance
	2nd	AC through pure capacitance, AC through RL, RC series Circuit.
7 <sup>th</sup>	1st	AC through RLC series circuits, Simple problems on RL, RC & RLC series circuits
	2nd	Concept of Power and Power factor, Impedance triangle and power triangle.
8 <sup>th</sup>	1st	Elementary idea on generation of electricity from Thermal power plant.
	2nd	Elementary idea on generation of electricity from hydro & nuclear power station with block diagram
9 <sup>th</sup>	1st	Introduction of DC machines, Main parts of DC machines, Classification of DC generator.
	2nd	Classification of DC motor, Uses of different types of DC generators & motors
10 <sup>th</sup>	1st	Types and uses of single phase induction motors, Concept of

		Lumen
	2nd	Different types of Lamps (Filament, Fluorescent, LED bulb) its Construction and Principle
11 <sup>th</sup>	1st	Star rating of home appliances (Terminology, Energy efficiency, Star rating Concept)
	2nd	Types of wiring for domestic installations, Layout of household electrical wiring (single line diagram), List out the basic protective devices used in house hold wiring.
12 <sup>th</sup>	1st	Calculate energy consumed in a small electrical installation
	2nd	Introduction to measuring instruments, Torques in instruments
13 <sup>th</sup>	1st	Different uses of PMMC type of instruments (Ammeter & Voltmeter), Different uses of MI type of instruments (Ammeter & Voltmeter)
	2nd	Draw the connection diagram of A.C/ D.C Ammeter, voltmeter, energy meter and wattmeter. (Single phase only)
14 <sup>th</sup>	1st	Review class
	2nd	<i>Assignment Evaluation &amp; Class Test</i>
15 <sup>th</sup>	1st	<i>Discussion on Previous year question paper</i>
	2nd	<i>Discussion on Previous year question paper</i>